

### **ABSTRACT OF THE DISCLOSURE**

The invention relates to a power semiconductor module, in particular a power converter module, with a base plate or for direct installation on a heat sink or other cooling body or means for cooling. The power semiconductor module includes, at least one power semiconductor component, and at least one insulating substrate on whose first surface a metallic layer is provided. A carbon-based layer (including Carbon nano-tubes) is used for at least one of a thermal and a partly electrical contacting, on at least one of the one side for contacting the power semiconductor component with the metallic layer and, (in an alternate embodiment) on the other side to connect the substrate with the heat sink or cooling body.